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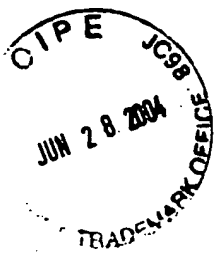
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Replacement Sheet

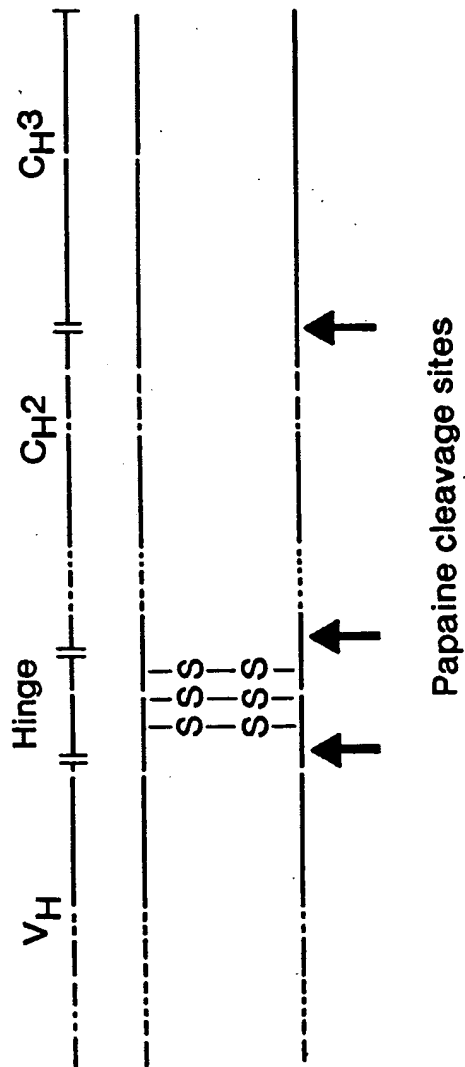


FIG. 5

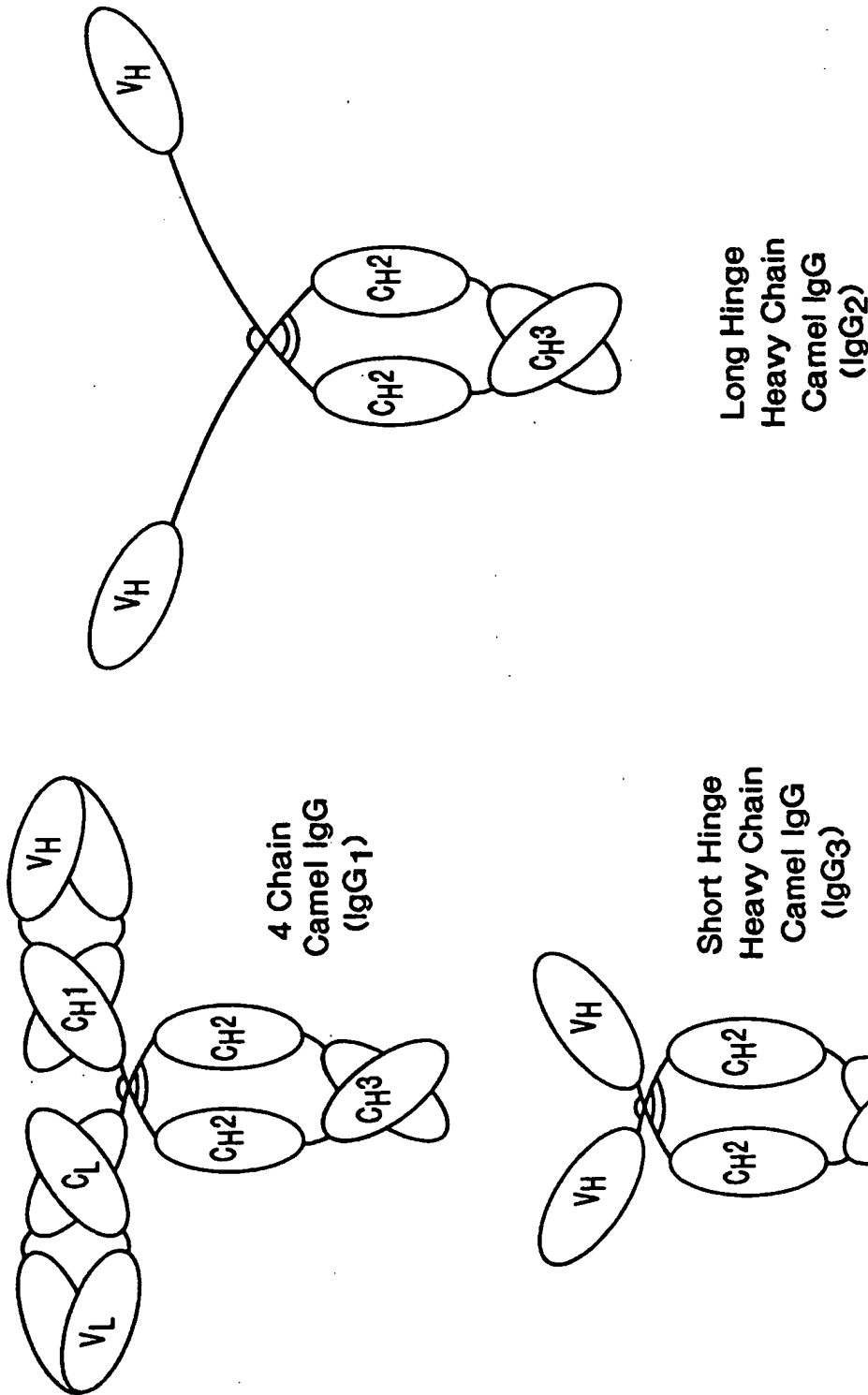


FIG. 6

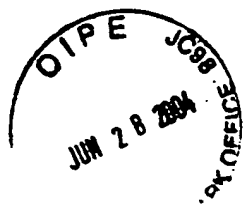


Replacement Sheet

SEQ ID NO: 92	DR01006	C-----TCGAG---	TCTGGGGGAGG
SEQ ID NO: 93	DR27006	C-----TCGAG---	TCTGGGGGAGG
SEQ ID NO: 94	DR03006	C-----AGGTGA-----AACTGCTCGAG---	TCTGGAGGAGG
SEQ ID NO: 95	DR11006	C-----TCGAG---	TCTGGGGGAGG
SEQ ID NO: 96	DR24006	C-----AGGTGA-----AACTGCTCGAG---	TCTGGGGGAGG
SEQ ID NO: 97	DR16006	C-----TCGAG---	TCTGGAGGAGG
SEQ ID NO: 98	DR19006	C-----TCGAG---	TCTGGAGGAGG
SEQ ID NO: 99	DR07006	C-----TCGAG---	TCTGGGGGAGG
SEQ ID NO: 100	DR16006	C-----TCGAG---	TCTGGGGGAGG
SEQ ID NO: 101	DR20006	C-----TCGAG---	TCAGGGGGAGG
SEQ ID NO: 102	DR25006	C-----TCGAG---	TCTGGGGGAGG
SEQ ID NO: 103	DR20006	C-----TCGAG---	TCTGGAGGAGG
SEQ ID NO: 104	DR21006	C-----TCGAG---	TCTGGGGGAGG
SEQ ID NO: 105	DR09006	C-----AGGTGA-----AACTGCTCGAG---	TCTGGGGGAGG
SEQ ID NO: 106	DR17006	C-----TCGAG---	TCTGGGGGAGG
SEQ ID NO: 107	DR13006	C-----TCGAG---	TCAGGGGGAGG
SEQ ID NO: 108	DR02006	CTCGAGTCAGGTGTCCGGTCTGATGTGCAGCTGGTGGCGTCTGGGGGAGG	

DR01006	ATCGGTGCAGGCTGGAGGGTCTCTGAGACTCTC--GTGCG-CAGCCTCTG
DR27006	CTCGGTGCAGGCTGGAGGGTCTCTGAGACTCTCCTGTGCATCTTCTTCTA
DR03006	CTCGGTGCAGACTGGAGGATCTCTGAGACTCTCCTGTGCAGT--C-TCTG
DR11006	GTCGGTGCAGGCTGGAGGGTCTCTGAGACTCTCCTGTAATGT--C-TCTG
DR24006	GTCGGTGCAGGCTGGAGGGTCTCTGAGACTCTCCTGTAATGT--C-TCTG
DR16006	CTCGGCGCAGGCTGGAGGATCTCTGAGACTCTCCTGTGCAGC--CCACGG
DR19006	CTCGGTTTCAGGCTGGAGGGTCCCTTAGACTCTCCTGTGCAGC--C-TCTG
DR07006	CTCGGTGCAGGGTGGAGGGTCTCTGAGACTCTCCTGTGCAA---TCTCTG
DR16006	CTCGGTGCAGGCTGGAGGGTCTCTGAGACTCTCCTGTACAG---GCTCTG
DR20006	CTCGGTACAGGTTGGAGGGTCTCTGAGACTCTCCTGTGTAG---CCTCTA
DR25006	CTCGGTACAACTGGAGGGTCTCTGAGACTCTCTTGCG---AAATCTCTG
DR20006	CTCGGTGCAGGCTGGAGGGTCTCTGAGACTCTCCTGTG---TAGCCTCTG
DR21006	CTCGGTGCAGGTTGGAGGGTCTCTGAACTCTCCTGTAAAT---CTCTG
DR09006	CTCGGTGCAGGCTGGGGGGTCTCTGACACTCTCTTGTTG---TATACAC--
DR17006	CTCGGTCCAACCTGGAGGATCTCTGACACTCTCCTGTACAGTT---TCTG
DR13006	CTCGGTGGAGGCTGGAGGGTCTCTGAGACTCTCCTGTACAG---CCTCTG
DR02006	CTCGGTGCAGGCTGGAGGCTCTCTGAGACTCTCCTGTACAG---CCTCTG

DR01006	GA--TACAGTAATT---GTCCCCTCACTTG-GAGCTGGTATCGCCAGTTT
DR27006	AA--TATATGCCTT---GCACCTACGACAT-GACCTGGTACCGCCAGGCT
DR03006	GA--TTCTCCTTTA---GTACCACTTGTAT-GGCCTGGTTCCGCCAGGCT
DR11006	GC--TCTCCAGTA---GTACTTATTGCCT-GGGCTGGTTCCGCCAGGCT
DR24006	GC--TCTCCAGTA---GTACTTATTGCCT-GGGCTGGTTCCGCCAGGCT
DR16006	GA--TTCCGC-TCA---ATGGTTACTACAT-CGCCTGGTTCCGTCAGGCT
DR19006	AC--TACACCATCA---CTGATTATTGCAT-GGCCTGGTTCCGCCAGGCT
DR07006	GA--TACACGTACG---GTAGCTTCTGTAT-GGGCTGGTTCCGCGAGGGT
DR16006	GA--TTCCCCTATA---GTACCTTCTGTCT-GGGGTGGTTCCGCCAGGCT
DR20006	CT--CACACCGACA---GTAGCACCTGTAT-AGGCTGGTTCCGCCAGGCT
DR25006	GA--TTGACTTTTG---ATGATTCTGACGT-GGGGTGGTACCGCCAGGCT
DR20006	GA--TTCAATTTTCG---AACTTCTCGTAT-GGCGTGGTACCGCCAGACT
DR21006	GAGGTACCCAGATCGTGTTCCTAAATCTTTGGCCTGGTTCCGCCAGGCT
DR09006	-----CAACGATACTGGGACCA-----TGGGATGGTTTCGCCAGGCT
DR17006	--GGGCCACCTACA---GTGACTACAGTATTGGA-TGGATCCGCCAGGCT
DR13006	G-----ATACGTAT-CCT----CTATGGCCTGGTTCCGCCAGGTT
DR02006	GAGA----CAGTTTCAGTAGATT--TGCCATGTCTTGGTTCCGCCAGGCT



Replacement Sheet

DR01006	CCAGGAACGGAGCGCGAGTTCGTCTCCAGTATGGATCCGGATGGAAATAC
DR27006	CCAGGCAAGGAGCGCGAATTTGTCTCAAGTATAAATATTGATGGTAAGAC
DR03006	TCAGGAAAGCAGCGTGAGGGGGTTCGAGCCATTAATAGTGCGGGTGGTAG
DR11006	CCAGGGAGGGAGCGTGAGGGGGTTCACAGCGATTAA-----CACTGATGG
DR24006	CCAGGGAAAGGAGCGTGAGGGGGTTCACAGCGATTAA-----CACTGATGG
DR16006	CCTGGGAAGGGGCGTGAGGGGGTTCGCAACAATTAATGGTGGTCG-----
DR19006	CCAGGGAAAGGAGCGTGAATTGGTTCGAGCGATTCAAGTTGTCCGTAGTGA
DR07006	CCAGGCAAGGAACGTGAGGGGGATCGCAACTATTCTTAATGGTGGTACTAA
DR16006	CCAGGGAAAGGAGCGTGAGGGGGTTCGCGG6TATTAATAGTGCAGGAGGTAA
DR20006	CCAGGGAAAGGAGCGCGAGGGGGTTCGCAAGTATATATTTTGGTGATGGTGG
DR25006	CCAGGGCATGAGTGCAAATTGGTCTCAGGTATTCTGAGTGATGGTACT-C
DR20006	CCAGGAAATGTGTGTGAGTTGGTCTCAAGTATTTACAGTGATGG-----
DR21006	CCAGAGAAGGAGCGCGAGGGGGATCGCAGTTCTTTGACTAAGGATGGTAA
DR09006	CCAGGGAAAGAGTGCGAAAGGGTTCGCGCATATTACGCCTGATGGTATGA-
DR17006	CCAGGGAAAGGACCGTGAAGTAGTCGCGAGCCGCTAATACTGGTG-----
DR13006	CCAGGGCAGGAGCGCGAGGGGGTTCGCGTTTGTTCAAACGG-----
DR02006	CCAGGGAAAGGAGTGCGAATTGGTCTCAAGCATTCAAAGTAATGGAAGGAC
DR01006	CAAGTACA-----CATACTCCGTGAAGGGCCGCTTCACC
DR27006	AACATACG-----CAGACTCCGTGAAGGGCCGATTTCACC
DR03006	GACATACTA-CAACACATATGTCGCCGAGTCCGTGAAGGGCCGATTTCGCC
DR11006	CAGTATCAT-ATACGCA-----GCCGACTCCGTGAAGGGCCGATTTCACC
DR24006	CAGTGTCAT-ATACGCA-----GCCGACTCCGTGAAGGGCCGATTTCACC
DR16006	-----CGA-CGTCACATACTACGCCGACTCCGTGACGGGCCGATTTCACC
DR19006	TACT--CGC-C-TCACAGACTACGCCGACTCCGTGAAGGGACGATTTCACC
DR07006	-----CATACTATGCCCAGTCCGTGAAGGGCCGATTTCACC
DR16006	-----TACTTACTATGCCGACGCCGTGAAGGGCCGATTTCACC
DR20006	-----TACGAATTATCGCGACTCCGTGAAGGGCCGATTTCACC
DR25006	CATATACAAAGAGTGAGAGTATGCTGAGTCTGTGAGGGGCGGGTTACC
DR20006	CA-AAACATACTACGTCGACC--GCA-----TGAAGGGCCGATTTCACC
DR21006	GA-----CATTCTATGCCGACTCCGTGAAGGGCCGATTTCACC
DR09006	-----CCTTCATTGATGAACCCGTGAAGGGGCGATTTCACG
DR17006	-----CGACTAGTAAATTCTACGTCGACTTTGTGAAGGGCCGATTTCACC
DR13006	--CTGACAAT-AGTGCAATTATATGGCGACTCCGTGAAGGGCCGATTTCACC
DR02006	AACTGA-----GGCCGATTCCGTGCAAGGCCGATTTCACC
DR01006	ATGTCCCGAGGCAGCACCGAGTACACAGTATTTCTGCAAATGGACAATCT
DR27006	ATCTCCCAAGACAGCGCCAAGAACACGGTGTATCTGCAGATGAACAGCCT
DR03006	ATCTCCCAAGACAACGCCAAGACCACGGTATATCTTGATATGAACAACCT
DR11006	ATCTCCCAAGACACCGCCAAGGAAACGGTACATCTCCAGATGAACAACCT
DR24006	ATCTCCCAAGACACCGCCAAGAAAACGGTATATCTCCAGATGAACAACCT
DR16006	ATCTCCCGAGACAGCCCCAAGAATACGGTGTATCTGCAGATGAACAGCCT
DR19006	ATCTCCCAAGGCAACACCAAGAACACAGTGAATCTGCAAATGAACAGCCT
DR07006	ATCTCCCAAGACAGCACGTTGAAGACGATGTATCTGCTAATGAACAACCT
DR16006	ATCTCCCAAGGGAATGCCAAGAATACGGTGTTCGCAAATGGATAACTT
DR20006	ATCTCCCAACTCAACGCCCAGAACACAGTGTATCTGCAAATGAACAGCCT
DR25006	ATCTCCAGAGACAACGCCAAGAACATGATATACCTTCAAATGAACGACCT
DR20006	ATTTCTAGAGAGAATGCCAAGAATACATTGTATCTACAACCTGAGCGGCCCT
DR21006	ATCTTCTTAGATAATGACAAGACCACTTTCTCCTTACAACCTTGATCGACT
DR09006	ATCTCCCGAGACAACGCCCAGAAAACGTTGTCTTTGCGAATGAATAGTCT
DR17006	ATTTCCCAAGACAACGCCAAGAATACGGTATATCTGCAAATGAGCTTCCT
DR13006	ATCTCCACGACAACGCCAAGAACACGCTGTATCTGCAAATGCGCAACCT
DR02006	ATCTCCCGAGACAATTCCAGGAACACAGTGTATCTGCAAATGAACAGCCT

FIG. 7B



Replacement Sheet

DR01006 GAAACCTGAGGACACGGCGATGTATTACTGTAAAAC-A---GCCCTAC--
DR27006 GAAACCTGAGGACACGGCGATGTATTACTGTAAAAT-A---GA--TTC--
DR03006 AACCCTGAAGACACGGCTACGTATTACTGTGCGGCGG---TCCCAGCCC
DR11006 GCAACCTGAGGATACGGCCACCTATTACTGCGCGGCAA---GACTGACGG
DR24006 GCAACCTGAGGATACGGCCACCTATTACTGCGCGGCAA---GACTGACGG
DR16006 GAAACCTGAGGACACGGCCATCTACTTCTGTGCGAGCAG---G-----CTC
DR19006 GACACCTGAGGACACGGCCATCTACAGTTGTGCGGCAA---C-----CAG
DR07006 GAAACCTGAAGACACGGGCACCTATTACTGTGCTG-CA---GAACTAAGT
DR16006 GAAACCTGAGGACACGGCCATCTATTACTGCGCGG-CG---GATAGTCCA
DR20006 GAAACCTGAGGACAGCGCCATGTACTACTGTGCAATCA---CTGAAATTG
DR25006 GAAACCTGAGGACACGGCCATGTATTACTGCGCGGTAGATGTTGGACCC
DR20006 CAAACCTGAGGACACGGCCATGTATTACTGTGCG-----CC
DR21006 GAACCCGGAGGACACTGCCGACTACTACTGCGCTGCAATCAATTAGC--
DR09006 GAGGCCTGAGGACACGGCCGTGTATTACTGTGCGGCGAGATTG-----
DR17006 GAAACCTGAGGACACGGCCATCTATTACTGTGCGGCGAG-----CGGACCC
DR13006 GCAACCTGACGACACTGGCGTGTACTACTGTGCGGCC-----CAA
DR02006 GAAACCCGAGGACACGGCCGTGTATTACTGTGGGGCAGT-----

DR01006 -----A-AC--CTGGGGGTTATTGTGGGTA-
DR27006 -----GTAC--CCGTGCCATCTCCTTGATG-
DR03006 ACTTGGGACCT-----GGCG-CCATT-----CTTGATTG
DR11006 AGATGGGGGCTTGTGATGCGAGATGGGCGACCTTAGC--GACAAGGAC-G
DR24006 AGATGGGGGCTTGTGATGCGAGATGGGCGACCTTAGC--GACAAGGAC-G
DR16006 GCGTTTTT-CTAGTCCTGTTGGGAGCACTTC-TAGAC---TCGAAAGTAG
DR19006 TAGTTTTTACTGGTACT-----GCAC-----C---ACG-----G
DR07006 GGTGGTAGTTGTGAATTGC---CTTTGC-----TATTTGACTA-----
DR16006 TGTTACATGCCGACTATGC---CCGCTCCCCGATACGAGACAGTTTTGG
DR20006 AGTGGTATGGGTGCAATTT---AAGGACTACTTTTACT---C-----G
DR25006 GGAAGGAAG--GGGGAATCGGGTTAC----CCTGGTCGGTCCAATGTGAA
DR20006 GGTGAA-----TATC----CTATTGCAGAC--ATGTGTT
DR21006 ---TGGTGGCTGGTATT-----TGGACCCGAATTACTGG-CTCTCTGTG
DR09006 ---GAAATACTGGA----CTTGTGGTGC--CCAGA-CTGG-----AG
DR17006 AAGTATATATTATAGTATC-----CTCCNNAT-----
DR13006 AAGAAGGATCGTA-----CTAGATGGG-----CGAGCCT-----
DR02006 -----CTCCCTAA--TGGACCGAATTTCT

DR01006 --TGGGTANTGCCTCTGGGGCCAGGGGACCCAGGTACCGTCTCCTCACT
DR27006 --T-----CTGGGGCCAGGGGACCCAGGTACCGTCTCCTCACT
DR03006 AAAAAGTATAAGTACTGGGGCCAGGGGACCCAGGTACCGTCTCCTCACT
DR11006 TTTGCGTATAACTACTGGGGCCGGGGGACCCAGGTACCGTCTCCTCACT
DR24006 TTTGCGTATAACTACTGGGGCCGGGGGACCCAGGTACCGTCTCCTCACT
DR16006 CGA-CT-ATAACTATTGGGGCCAGGGGATCCAGGTACCGTCACTCACT
DR19006 CGC-CTTATAACGTCTGGGGTACAGGGGACCCAGGTACCGTCTCCTCACT
DR07006 CTGGG-----GCCAGGGACCCAGGTACCGTCTCCTCACT
DR16006 CTGGGATGATTTT-----GGCCAGGGGACCCAGGTACCGTCTCCTCACT
DR20006 CTGGG-----GCCAGGGGACCCAGGTACCGTCTCCTCACT
DR25006 GATGGTTATAACTATTGGGGCCAGGGGACCCAGGTACCGTCTCCTCAC-
DR20006 CGAGAT----ACG---GCGACCCGGGGACCCAGGTACCGTCTCCTCAC-
DR21006 GGTGCATATGCCATCTGGGGCCAGGGGACCCAGGTACCGTCTCCTCAC-
DR09006 GATACTTCGGACAG-TGGGGTACAGGGGGCCAGGTACCGTCTCCTCACT
DR17006 --TGAGTATAAGTACTGGGGCCAGGGGACCCAGGTACCGTCTCCTCA--
DR13006 CGAGAATGGAACAACTGGGGCCAGGGGACCCAGGTACCGTCTCCTCA--
DR02006 CCAACATGGG--TGCCGGGGCCAGGGAACCCAGGTACCGTCTCCT----



Replacement Sheet

DR01006	AG----	TTACCCGTACGACGTTCCGGACTACGGTTCTTAATAGAATTC
DR27006	AG----	TTACCCGTACGAGCTTCCGGACTACGGTTCTTAATAGAATTC
DR03006	AGCTAGTTACCCGTACGACGTTCCGGACTACGGTTCTTAATAGAATTC	
DR11006	AG----	TTACCCGTACGACGTTCCGGACTACGGTTCTTAATAGAATTC
DR24006	AGCTAGTTACCCGTACGACGTTCCGGACTACGGTTCTTAATAGAATTC	
DR16006	----	AGTTACCCGTACGACGTTCCGGACTACGGTTCTTAATAGAATTC
DR19006	----	AGTTACCCGTACGACGTTCCGGACTACGGTTCTTAATAGAATTC
DR07006	----	AGTTACCCGTACGACGTTCCGGACTACGGTTCTTAATAGAATTC
DR16006	----	AGTTACCCGTACGACGTTCCGGACTACGGTTCTTAATAGAATTC
DR20006	----	AGTTACCCGTACGACGTTCCGGACTACGGTTCTTAATAGAATTC
DR25006	---	TAGTTACCCGTACGACGTTCCGGACTACGGTTCTTAATAGAATTC
DR20006	---	TAGTTACCCGTACGACGAACCGGACTACGGTTCTTAATAGAATTC
DR21006	---	TAGTTACCCGTACGACGTTCCGGACTACGGTTCTTAATAGAATTC
DR09006	AGCTAGTTACCCGTACGACGTTCCGGACTACGGTTCTTAATAGAATTC	
DR17006	-----	
DR13006	-----	
DR02006	-----	-----TA

FIG. 7D

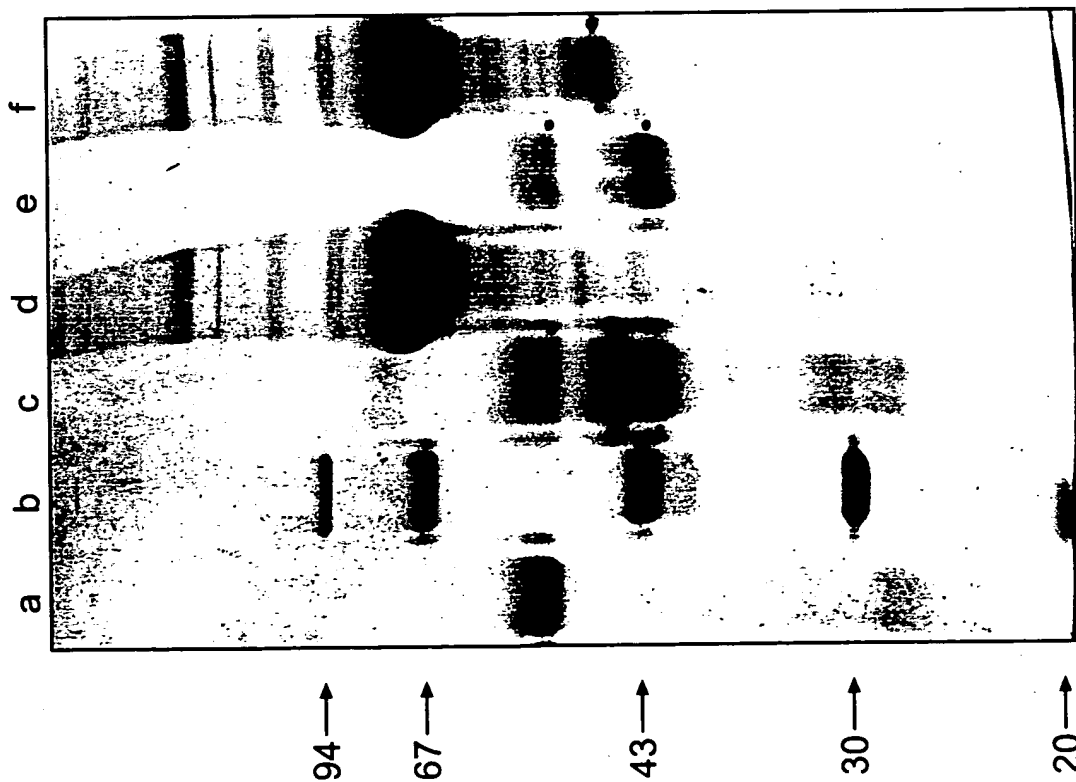


FIG. 1A

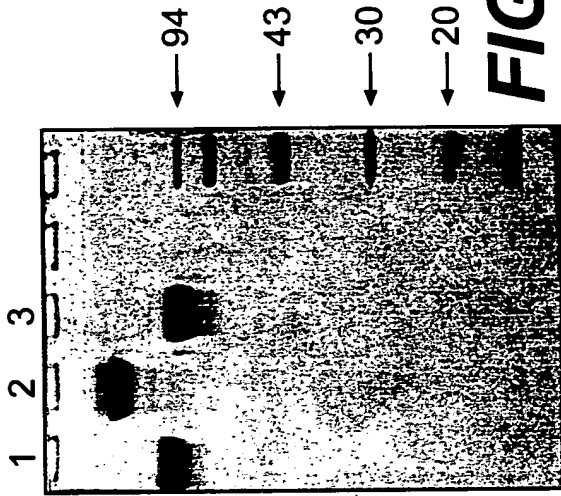


FIG. 1B

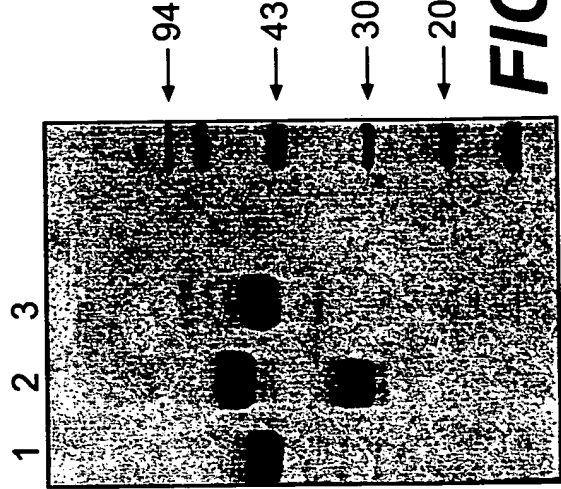


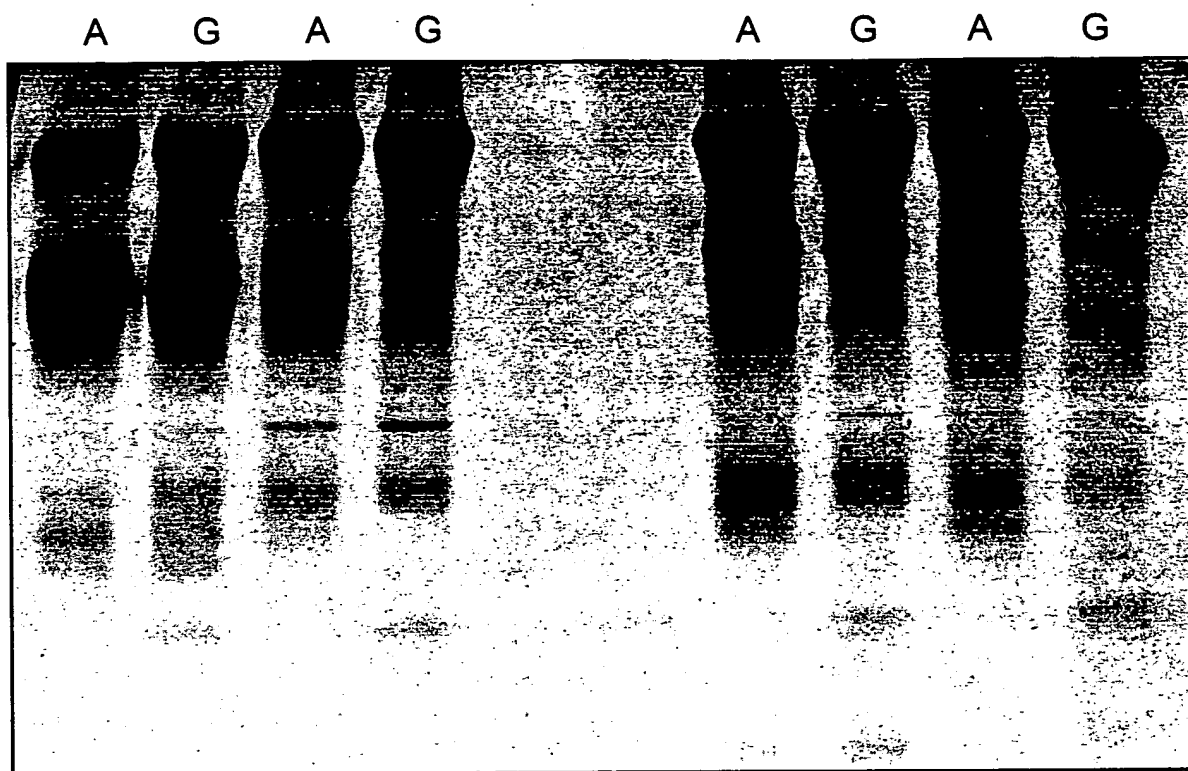
FIG. 1C



062804

13281 U.S. PTO

Replacement Sheet



C. bactrianus

L. vicugna

L. glama

L. pacos

FIG. 2A

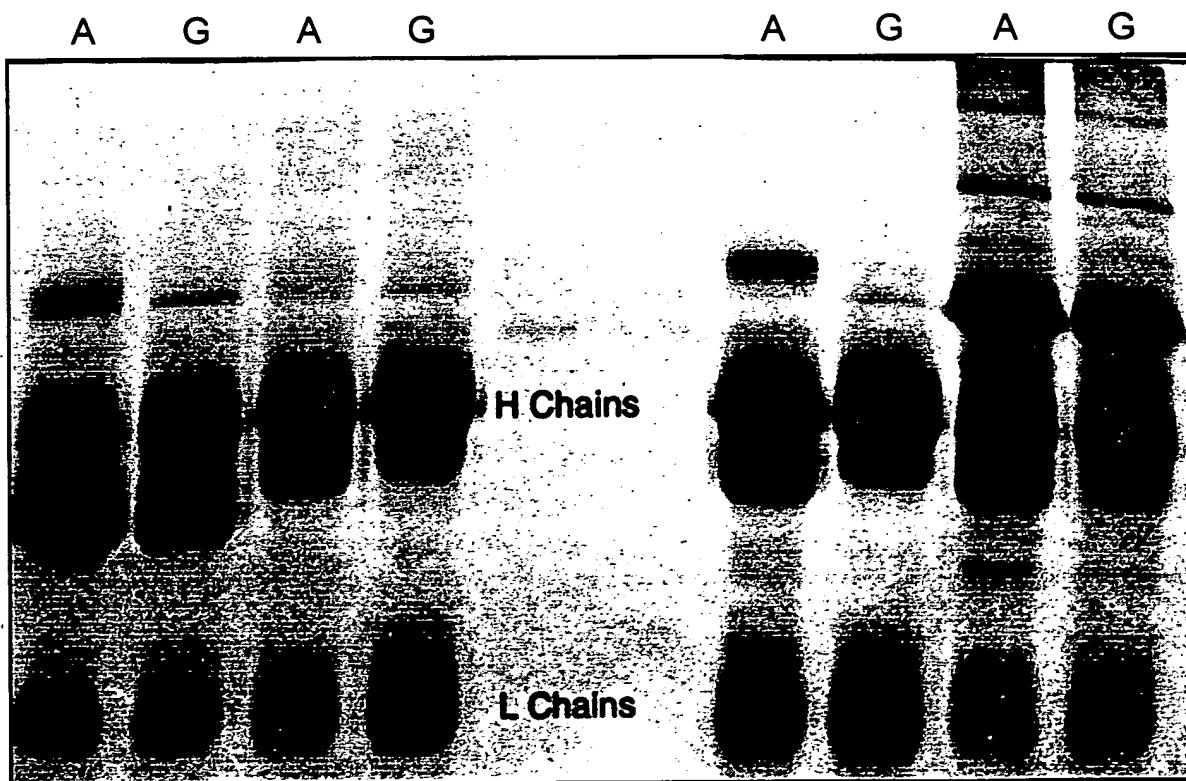


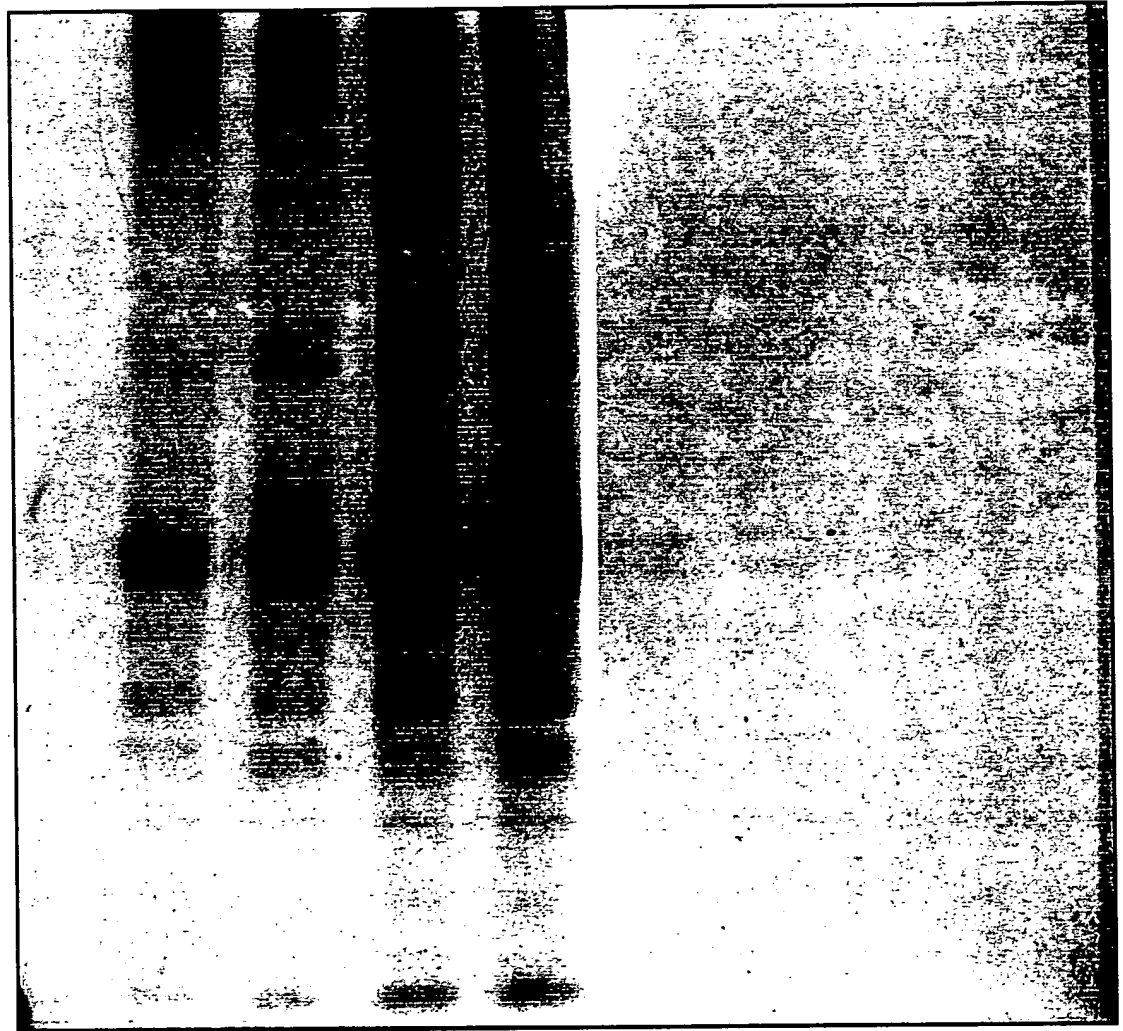
FIG. 2B



062804

13281 U.S. PTO

Replacement Sheet



Prot. A		Ig1	Ig2	Ig3	Tot.Ser	Ig1		Ig2	Ig3	Tot.Ser
Control		T. evansi infected				Healthy				
Counts/5ul	65	1258	1214	2700	2978	147	157	160	107	

FIG. 3A

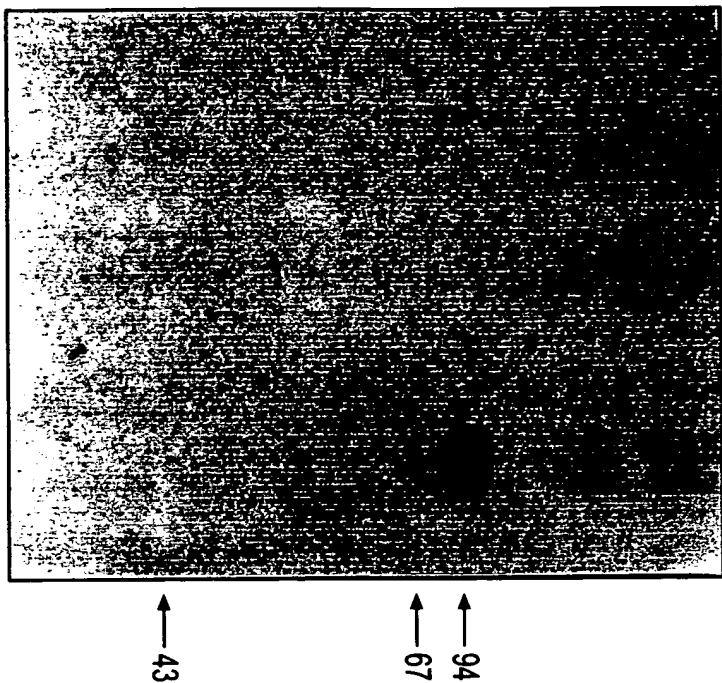


FIG. 3B

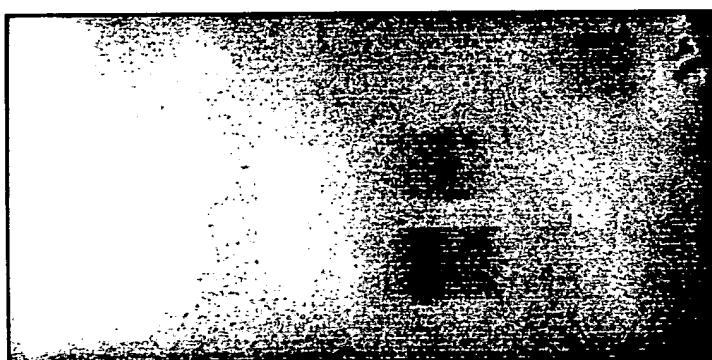


FIG. 3C

Replacement Sheet

13281 U.S. PTO
062804

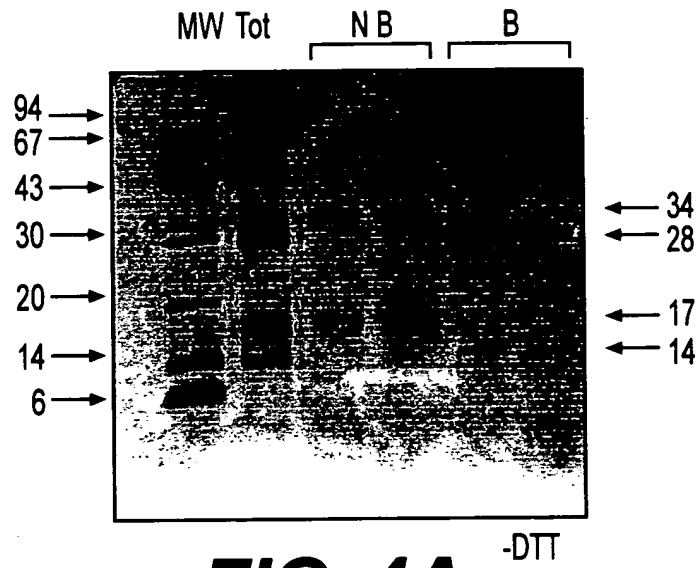


FIG. 4A

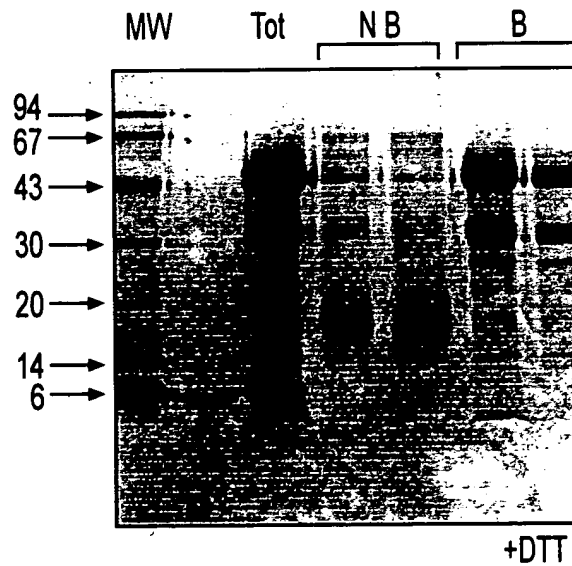


FIG. 4B

FIG. 8B

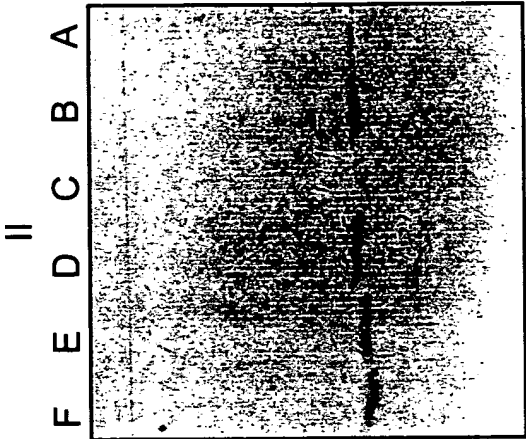


FIG. 8A

